

THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS

DIOMED, INC.,

Plaintiff,

v.

Civil Action No. 04-10019 RGS

ANGIODYNAMICS, INC.,

Defendant.

DIOMED, INC.,

Plaintiff,

v.

Civil Action No. 04-10444 RGS  
**(CONSOLIDATED UNDER  
04-10019 RGS)**

VASCULAR SOLUTIONS, INC.,

Defendant.

**SECOND DECLARATION OF CHIEH-MIN FAN, M.D.**

1. I, Chieh-Min Fan, M.D. practice as a full-time attending interventional radiologist at Massachusetts General Hospital (MGH) in the Department of Radiology, Division of Cardio-Vascular Imaging and Intervention.

2. Since I executed my first declaration in this case on December 19, 2005, counsel for Diomed has informed me that AngioDynamics and VSI have identified U.S. Patent No. 6,638,273 ("273 patent") as another reference they contend invalidates the '777 patent. I have reviewed the '273 patent and it does not, either alone or in combination with the other identified references, disclose all the elements of the '777 patent, which presents a unique and novel method of thermal ablation of the saphenous vein embodying the key elements of a **bare-tip optical fiber** as the primary site of energy delivery, placement of the fiber tip in contact with

the vein wall for delivery of energy into the vein wall, with drainage and compression of the vein, resulting in a narrowing of the vein.

3. Furthermore, even taken together, the '273 patent in combination with the other references identified by AngioDynamics and VSI do not lead to a conclusion that the method described in the '777 patent would have been obvious to one of skill in the art.

4. The '273 patent, like the other Farley reference described in my expert report and first declaration, describes the use of an expandable electrode catheter for focal thermal ablation of hollow anatomical structures (e.g., veins) to shrink expanded valves and restore competency to the vein. While several embodiments of the device design are presented in the patent, the use of laser energy is only mentioned once in a list of potential energy types that could hypothetically be used to treat veins. Key differences between the procedure described in the '273 patent and the '777 patent are described in the following paragraphs.

5. *No specific fiber optic is described in the '273 patent, let alone a bare tipped fiber to be used in contact with the vessel wall.* Laser fibers are never described in the '273 patent. The term "LASER" is only used in a laundry list of other types of energy that could hypothetically be used to practice the method described in the '273 patent. The patent provides no teaching to one of skill in the art on how to use laser energy to practice the method described in the '273 patent, let alone use a bare tipped laser fiber in those treatments. Furthermore, even if one of skill in the art attempted to use laser energy to practice the method described in the '273 patent, that person would **not necessarily** use a bare tipped laser fiber as many laser fibers without bare tips existed in 1999 that one could attempt to use.

6. *The '273 patent does not teach compression when a vessel length is being treated.* In the '273 patent, external pressure is always used when treating a *valve*, see, e.g., Figs 12-13,

15 and text describing same – but is not used when treating a section of vein other than the valve (Col. 16, lines 56-65).

I swear under the pains and penalties of perjury that the foregoing is true and accurate to the best of my knowledge and belief.

Dated: February 28, 2006

  
\_\_\_\_\_  
Chieh-Min Fan, M.D.